(Claims)

1. A code division multiple communication system in which in a transmitter, a code division multiple signal, composed of a data division obtained by multiplying a baseband data and an orthogonal code and a preamble division including synchronization code sequences to attain the chip synchronization of the orthogonal code in a receiver, is modulated with a carrier having a given center frequency and transmitted, and in the receiver, a correlation peak is detected from among the synchronization code sequences in the preamble division by a surface acoustic wave matched filter and the baseband data in the data division is demodulated by the orthogonal code generated on the detection timing, wherein the preamble division has plural synchronization code sequences, and the surface acoustic wave matched filter detects the correlation peak of at least one from among the plural synchronization code sequences and generates the orthogonal code on the detection timing of the correlation peak.

2. A code division multiple communication system as defined in claim 1, wherein the preamble division is composed of $N_{burst}$-multiple repeated synchronization bursts, each burst being composed of a synchronization packet division having at least one synchronization code sequence and a dummy division next to the packet division, and the period of one synchronization burst ($T_{burst}$) is set to be integral times as long as the period of one symbol in the data division ($T_{symbol}$).

3. A code division multiple communication system as defined in claim 2, wherein the period of the burst in the preamble division ($T_{burst}$) is set equally to the period of one symbol in the data division ($T_{symbol}$).

4. A code division multiple communication system as defined in claim 2 or 3, wherein the multiple repeated number $N_{burst}$ of the plural

- 29 -

bursts constituting the preamble division is set to 5-15.

5. A code division multiple communication system as defined in claim 4, wherein the multiple repeated number $N_{burst}$ of the plural bursts constituting the preamble division is set to 6-12.

6. A code division multiple communication system as defined in any one of claims 1-5, *Claim 1* wherein the chip rate of the synchronization code sequence in the preamble division is higher than the chip rate of the orthogonal code in the data division.

7. A code division multiple communication system as defined in any one of claim 6, wherein the chip rate of the synchronization code sequence in the preamble division is integral times of not less than two as high as the chip rate of the orthogonal code in the data division.

8. A code division multiple communication system as defined in any one of claims 1-7, *Claim 1* wherein the chip length of the orthogonal code in the data division is set to 64 chips.

9. A code division multiple communication system in which in a transmitter, a code division multiple signal, composed of a data division obtained by multiplying a baseband data and an orthogonal code and a preamble division including synchronization code sequences to attain the chip synchronization of the orthogonal code in a receiver, is modulated with a carrier having a given center frequency and transmitted, and in the receiver, a correlation peak is detected from among the synchronization code sequences in the preamble division by a surface acoustic wave matched filter and the baseband data in the data division is demodulated by the orthogonal code generated on the detection timing, wherein the period of the synchronization burst, in the preamble division ($T_{burst}$), which is composed of a synchronization packet division having at least one synchronization code sequence and a dummy division next to the

packet division, is set equally to the period of one symbol in the data division ($T_{symbol}$).

10. A code division multiple communication system as defined in claim 9, wherein the preamble division has plural synchronization bursts.

11. A code division multiple communication system as defined in claim 10, wherein the repeated number of the plural synchronization bursts in the preamble division is set to 5-15.

12. A code division multiple communication system as defined in claim 11, wherein the repeated number of the plural synchronization bursts in the preamble division is set to 6-12.

13. A code division multiple communication system as defined in ~~any one of claims 9-12,~~ Claim 9 wherein the chip rate of the synchronization code sequence in the preamble division is higher than the chip rate of the orthogonal code in the data division.

14. A code division multiple communication system as defined in claim 13, wherein the chip rate of the synchronization code sequence in the preamble division is integral times of not less than two as high as the chip rate of the orthogonal code in the data division.

15. A code division multiple communication system as defined in ~~any one of claims 9-14,~~ Claim 9 wherein the chip length of the orthogonal code in the data division is set to be 64 chips.

16. A code division multiple communication system in which in a transmitter, a code division multiple signal, composed of a data division obtained by multiplying a baseband data and an orthogonal code and a preamble division including synchronization code sequences to attain the chip synchronization of the orthogonal code in a receiver, is modulated with a carrier having a given center frequency and transmitted, and in the receiver, a correlation peak is detected from among the synchronization

code sequences in the preamble division by a surface acoustic wave matched filter and the baseband data in the data division is demodulated by the orthogonal code generated on the detection timing, wherein in the receiver, the orthogonal code which is generated on the detection timing of the correlation peak in the surface acoustic wave matched filter is multiplied by the received code division multiple signal to generate a narrow-band modulation signal, and the generated narrow-band modulation signal is demodulated by a carrier generated from a local oscillator provided in the receiver to reproduce the original baseband data.

17. A code division multiple communication system as defined in claim 16, wherein the local oscillator provided in the receiver generates the carrier having the frequency equal to the center frequency of the carrier generated in the transmitter, and the generated carrier from the local oscillator is multiplied by the narrow-band modulation signal to demodulate the baseband data.

18. A code division multiple communication system as defined in claim 16, wherein the local oscillator provided in the receiver generates a carrier having a different frequency from the center frequency of the carrier generated in the transmitter, the generated carrier from the local oscillator being multiplied by the narrow-band modulation signal to generate a narrow-band modulation signal having their differential frequency, and the narrow-band modulation signal having the differential frequency is demodulated to demodulate the baseband data.

19. A code division multiple communication system as defined in any one of claims 16-18, wherein the preamble division is composed of multiple repeated synchronization bursts, each burst being composed of a synchronization packet division having at least one synchronization code sequence and a dummy division next to the packet division, and the

- 32 -

period of one synchronization burst ($T_{burst}$) is set to be integral times as long as the period of one symbol in the data division ($T_{symbol}$).

20. A code division multiple communication system as defined in claim 19, wherein the period of one synchronization burst ($T_{burst}$) is set equally to the period of one symbol in the data division ($T_{symbol}$).

21. A code division multiple communication system as defined in claim 20, wherein the repeated number of the plural synchronization bursts in the preamble division is set to 5-15.

22. A code division multiple communication system as defined in claim 21, wherein the repeated number of the plural synchronization bursts in the preamble division is set to 6-12.

23. A code division multiple communication system as defined in ~~any one of claims 16-22,~~ Claim 16 wherein the chip rate of the synchronization sequence in the preamble division is set to be higher than the chip rate of the orthogonal code in the data division.

24. A code division multiple communication system as defined in 23, wherein the chip rate of the synchronization sequence in the preamble division is set to be integral times of not less than two as high as the chip rate of the orthogonal code in the data division.

25. A code division multiple communication system as defined in ~~any one of claims 16-24,~~ Claim 16, wherein the chip length of the orthogonal code in the data division is set to 16.

26. A code division multiple communication system as defined in ~~any one of claims 1-25,~~ Claim 1 wherein the surface acoustic wave matched filter has an aluminum nitride film as its component.